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(54) Title: METHOD AND SYSTEM FOR PRESENTING CUSTOMIZED PROMOTIONAL OFFERS

(57) Abstract

A computerized system for presenting promotional offers customized to individual consumers includes one primary machine (14) including a data processing unit (34) coupled to a storage device (36) for storing individual consumer preference information, product information, and customized promotional offer information. A secondary machine (12) is adapted to receive the customized promotional offer information from the primary machine and to present customized offers and accumulate promotional offer selection information in response to consumer interaction therewith. The secondary machine transmits the offer selection information to the primary machine. A plurality of point of sale terminals (16) accumulate consumer transaction information which is in turn transmitted to the primary machine. The primary machine stores the individual offer selection information and individual consumer brand purchase information and generates an individual consumer profile. Then the primary machine generates customized promotional offer information based on the individual consumer file and product promotion information.

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METHOD AND SYSTEM FOR
PRESENTING CUSTOMIZED PROMOTIONAL OFFERS

BACKGROUND OF THE INVENTION

This invention relates to a computerized system for
presenting promotional offers, and in particular, to a system
that creates a profile of individual consumers and tailors
promotional offers to each individual consumer based on the
consumer's profile and product promotion information generated
by management.

There are many different types of consumers, some of
which shop based primarily on brand name, while others shop
based primarily on price. Over the years, large manufacturers
have competed for brand loyalty, and have historically been
able to influence consumers and gain consumer loyalty through
advertising and promotion of their products. A primary means
of promotion has been through the medium of couponing. It is
estimated that less than 1% of magazine coupons are redeemed;
1.8% of newspaper coupons are redeemed; and 3.8% of direct
mail coupons are redeemed by consumers. Accordingly, product
manufacturers who spend a great deal of money on coupons
desire to increase consumer redemption of coupons. Also,
manufacturers desire to increase the effectiveness of
promotional money spent by customizing offers to specific
consumers based on consumer profiles.

Computerized couponing systems are known in the prior art
as exemplified in US Patent No. 4,554,446 (Murphy, et al.).
This prior art couponing system provides for the validated
redemption of coupons presented at checkout, and may be
provided as a front-end couponing system where coupons are

issued based on consumer interaction at the beginning of the shopping event. This patent discloses a combined coupon distribution and inventory control system. This early patent laid the ground work for consumer generation of coupons electronically, and for the electronically generated coupons to be scanned electronically at the check-out to ensure compliance with the terms of the promotion. However, the patent does not teach a way of customizing offers to target particular consumers based on consumer profiles.

A second prior art couponing system was the subject of three related patents, US Patent Nos. 4,723,212 (Mindrum et al.); 4,910,672 (Off, et al.); and 5,173,851 (Off, et al.). These three related patents are directed to a system also based on consumer interaction and may be provided as a back-end couponing system. A back-end couponing system provides consumers with coupons at the end of the shopping event. For example, the consumer walks through a supermarket and gathers products. At check-out, the products are scanned and the store controller indicates the price, etc. A memory device is provided for recording the terms of at least one coupon deal. Then, when a triggering product is scanned, it automatically causes a coupon to be printed. Accordingly, a coupon is printed in response to consumer interaction through the purchase of a triggering product.

The prior art couponing systems have made preliminary attempts and set preliminary ground work for the printing and handling of coupons in store locations in accordance with some consumer activity. The consumer activity could be a consumer

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choosing the coupon from a kiosk screen (front-end), or purchasing a triggering product (back-end). However, none of the prior art couponing systems have developed customized individual computer databases based on consumer purchase characteristics.

Accordingly, it is desirable to provide a couponing system which overcomes the shortcomings. of the prior art configurations described above.

SUMMARY OF THE INVENTION

Generally speaking, in accordance with the invention, a computerized system for presenting customized promotional offers to individual consumers is provided. Promotional offers include product discounts, discount coupons, vouchers, advertising messages or any other promotional message that attempts to modify consumer purchase behavior. The system includes at least one primary machine including data processing unit coupled to a storage device for storing individual consumer preference information. At least one secondary machine is adapted to receive the customized offer information from the primary machine and to produce customized offers and offer selection information in response to consumer interaction therewith. The at least one secondary machine transmits the consumer offer selection information to the at least one primary machine. A plurality of point of sale terminals are provided and each includes a member for accumulating consumer transaction information from check-out including consumer brand purchase information. Transaction

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information is transmitted by the accumulating member to the at least one primary machine. The at least one primary machine stores the individual offer selection information and consumer transaction information and generates an individual consumer profile. Then, the at least one primary machine generates customized promotional offer information based on the individual consumer profile and product information.

The present invention is designed such that the primary machine (a computer) includes storage (memory) where individual consumer data is stored. The data is received at least in part from the secondary machines and the point of sale terminals. The secondary machines present the offers available for consumer selection, and summarize selection information for transmission to the primary machine. The point of sale terminals transmit to the primary machine (in the transaction information) the products purchased by the consumer, and customized offers the consumer accepted.

Accordingly, it is an object of the invention to provide an improved presentation mechanism that displays customized promotional offers targeted to individual consumers.

Another object of the invention is to categorize consumers based on purchase quantities and brand loyalty.

Yet another object of the invention is to use consumer profile information to present offers that are designed to persuade consumers toward the purchase and trial of new brand products.

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Still another object of the invention is to present

offers on products that the consumer does not have a history

of purchasing.

A further object of the invention is to provide a

presentation mechanism for promotional offers that can be

accessed by a consumer at the consumer's home or office by

using a personal or other computer as the secondary machine.

Still other objects and advantages of the invention will

in part be obvious and will In part be apparent from the

specification.

The invention accordingly comprises the several steps and

the relation of one or more of such steps with respect to each

of the others, and the apparatus embodying features of

construction, combinations of elements and arrangements of

parts which are adapted to effect such steps, all as

exemplified in the following detailed description, and the

scope of the invention will be indicated in the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

For a fuller understanding of the invention, reference is

had to the following description taken in connection to the

accompanying drawings, in which:

Fig. 1 is a block diagram of a preferred embodiment of

the apparatus for presenting customized promotional offers:

Fig. 2 is a schematic block diagram illustrating

information flow patterns; and

Figs. 3A and 3B are flow charts illustrating the logic

steps of the method of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Reference is first made to Fig. 1, which illustrates the preferred embodiment of the apparatus for presenting customized promotional offers which is generally indicated at 10. The apparatus includes three main portions, the primary machine 14, at least one secondary machine 12 (only one machine is shown) and at least one point of sale terminal 16 (only one is shown).

Primary machine 14 is the central portion of the system and includes a database server and presentation engine 34 coupled to a manufacturer database 38 and a consumer database 36. Information is provided to database server and presentation engine 34 on an ongoing basis in order to update manufacturer database 38. Furthermore, the database server and presentation engine 34 continuously updates consumer database 36 based on offer selection information by the consumer through use of a secondary machine 12, and consumer purchases recorded through point of sale terminals 16.

The secondary machines 12 are preferably kiosks located at in-store locations. These are generally known in the art as front-end couponing terminals. Each secondary machine 12 includes a processor 28 that is coupled to a display 30, data input terminal 26, consumer ID terminal 24, coupon printer 22 and storage device 32. The processor is not required to be very powerful, and can be a single purpose processor, rather than a multipurpose processor. However, in the preferred embodiment, the processor in each secondary machine 12 is a conventional CPU, such as a Pentium processor produced by

Intel. Processor 28 is coupled to display 30, such as a
conventional computer monitor used with a home computer. The
processor is coupled to a data input terminal 26 which can be
a keyboard, a touch screen, a mouse, or a combination thereof.

Optionally, a consumer ID terminal 24 is provided.
Consumer ID input terminal 24 can be some type of magnetic
stripe reader for use with consumer ID cards. Each consumer
ID card is preferably similar to a credit card and includes a
magnetic stripe that indicates the identification of the user.
Other options are that each consumer may simply have an
identification number, so that no ID card is required, or the
ID card can include a bar code that is readable by a scanner.

Storage device 32 is provided to temporarily store
consumer data, and promotion information, as well as screen
displays and the like used by the kiosk. Finally, after the
consumer chooses a particular offer, it is printed by coupon
printer 22.

In a retail store scenario, after the consumer receives
coupons and shops throughout the store, the consumer checks
out at point of sale terminals 16. Point of sale terminal 16
is generally an electronic cash register check-out system
which includes a central processor 40 which is coupled to a
cash register 44, a scanner 46, a storage device 48 and
optionally a system ID scanner 42. Cash register 44 includes
a data input device such as a keyboard, mouse, display screen
and the like. The consumer ID scanner 42 is similar to that
of consumer ID input terminal 24 of secondary machine 12, and
includes means for reading the magnetic stripe on an ID card

or may optionally include a bar code scanner in a system where
a bar code is used to identify the consumer, rather than a
magnetic stripe.

Scanner 46 is a conventional scanner as used in
conventional check-out systems to read the UPC codes on
products during check-out. Storage device 48 is memory in the
form of ROM, RAM or can be conventional hard disk. Storage
device 48 includes the check-out program, and optionally
stores the consumer purchase information, temporarily, until
it is transmitted to primary machine 14. Point of sale
terminals 16 preferably transmit information to primary
machine 14 at predetermined intervals.

It is to be understood that primary machine 14 is the
central processor of the system, and preferably is located at
a retail store using the system, or located centrally in the
case of global consumer access. Secondary machines 12 are
preferably also located at in-store locations, or, can be a
personal computer in a user's home or office, and can interact
with a primary machine 14 through an on-line service, or over
the Internet or interactive television service. In this way,
a consumer that is preparing to go shopping may determine what
items he/she would like to purchase, and may access different
manufacturer databases, or retail store databases, in order to
determine where he/she may receive the most favorable
promotional discounts.

As stated above, point of sale terminals 16 are
preferably located at the check-out area of a retail store;
however, point of sale terminals in an on-line system may be

at the shipping locations. For example, a catalogue company
may have a point of sale terminal where the shipping
department enters the products purchased, the consumer ID and
the consumer discount offered at that time. This enables
coupon discounts to be accessed and either printed for in--
store use or transmitted over on-line services for redemption
on-line.

Referring now specifically to Fig. 2, apparatus for
presenting customized promotional offers 10 is illustrated in
an information flow block schematic representation, and like
reference numerals are used to refer to like elements.

Primary machine 14 is coupled to secondary machine 12.
The elements of secondary machine 12 and primary machine 14
are described above in connection with Fig. 1, and primary
machine 14 receives three types of information. There are two
types of consumer data which are received in connection with
consumers' actions 70. There is consumer demographic
information, generally indicated at 72, and individual
consumer behavior information, generally indicated at 74.
Furthermore, there is manufacturer promotional data
information, generally indicated at 76.

Consumer demographic and preference information 72 is
received by initializing a demographic survey in step 80,
proceeding to enter and update survey data in step 82 thereby
creating a demographic database repository 84. The data from
demographic database repository 84 is then transmitted to
database server and presentation engine 34 in the form of

demographic behavioral and consumer preference data which is

then entered into consumer database 36.

Furthermore, when consumers take action in step 70,

individual consumer behavior information 74 is activated.

Consumer action 70 takes place either by the consumer

obtaining a coupon throughout the system, or making a

purchase. The consumer can request a coupon in step 92, which

takes place at secondary machine 12. Then the information is

processed in step 93 by secondary machine data processor 28,

and stored in step 94 (in storage device 32 of Fig. 1). At

predetermined intervals this stored information is transmitted

to database server and presentation engine 34 for transmission

to consumer data storage 36.

Consumer action 70 can also result in product selection

90. The product is selected 90 and is checked out 95 at a

point of sale terminal 16. Check-out 95 can either be through

a cash register or scanner. The information from check-out 95

is processed in step 96 by point of purchase data processor

40. This data is temporarily stored in step 98 and is then

transmitted to database server and presentation engine 34 for

entry into consumer database 36.

Manufacturer promotional data information 76 considers

consumer data compiled in the consumer database 36, and

processed by database server and presentation engine 34, and

particular information is transmitted to manufacturer

promotional data information 76. Then, manufacturer actions

100 are considered. In step 102 (advertise product) the

manufacturer contacts the system supplier and signs up for the

service. The particular discount coupons being offered by the

manufacturer are entered onto the system in step 104

(promotion data entry). This forms a promotion database

repository 106 which is transmitted to database server and

presentation engine 34 for storing in manufacturer database

38.

Accordingly, a database is created that contains consumer

characteristics on a demographic basis, and consumer

characteristics from actual individual consumer activities.

Furthermore, manufacturer discount offers are logged into a

separate database. Thus, for each consumer, the database

system works from the first use to customize the database

based on demographic data, and the database becomes more

customized as the user continues to make purchases and obtain

coupons.

Reference is next made to Figs. 3A and 3B which in

combination illustrate the flow of information in database

server and presentation engine 34. As described above, the

presentation engine receives consumer data from consumer

database 36 of Fig. 1, and manufacturer data from manufacturer

database 38 of Fig. 1. Manufacturer data is entered in the

form of promotion availability data entry 150 (described in

more detail in Fig 2). In step 152 this data is formed into a

machine useable promotion and marketing database format

(manufacturer database 38 of Fig. 1). Alternatively,

transaction/behavioral data entry 156 and import consumer

purchase/profiles 158 are constantly updated and are formed

into a machine useable consumer behavioral database in step

160. As described above, transaction/behavioral data 156 is

received from demographic studies, described above as consumer

demographic information 72. Import consumer purchases/profiles

158 is essentially received from individual consumer behavior

information 74, and the combination thereof forms consumer

database 36 which is essentially the same as the consumer

behavioral database formed in step 160.

The consumer presentation process is initiated in step

162 by receiving promotional and marketing database, formed in

step 152, and consumer behavioral database, formed in step

160, and with the information in these databases the database

server and presentation engine chooses the applicable coupons

for each consumer. The information flow diagram of Figs. 3A

and 3B illustrate one cycle of the presentation engine for a

single consumer and the presentation engine starts at step 162

for each consumer.

The promotional offers made available by manufacturers

which are listed in the promotion and marketing database

formed in step 152 are reviewed one promotion at a time

beginning in step 162. After step 162, a single promotion is

considered in step 164 and it is determined whether any

behavior from the consumer database 160 for the individual

consumer being considered is associated with the promotion

under consideration in step 162. If there is not any behavior

from consumer database 160 that is associated with the entry

in step 162, then a default presentation (offer choice) is

presented in step 166. The process then loops back to step

162 to consider the next potential promotion.

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Alternatively, if the answer in step 164 is "yes", then
the process moves to logic block 172 and asks whether the
consumer's purchasing behavior is loyal. Loyal behavior
refers to the behavior of the consumer as consistently
purchasing products, as defined by management, of the
manufacturer whose product is now being considered. If the
answer is yes the consumer is loyal, then the process moves to
logic block 174 and asks whether the consumer's purchase
behavior is strong or heavy. Strong or heavy behavior refers
to large amounts of purchases. If the answer in logic block
174 is "yes", then the process moves to block 176 and the
consumer is logged in as a heavy loyal consumer.
Alternatively, if the answer is "no", then the process moves
to block 178 and the consumer is logged in as a light loyal
consumer. In either case, after step 176 or 178, the process
moves to "A" which appears at the top of Fig. 3B.

If the answer was "no" in logic block 172 (the behavior
is not loyal) then the process moves to logic block 170 and
asks whether the consumer is a "switcher" in connection with
the particular product. A "switcher" is defined as a person
who does not have any particular brand loyalty, as defined by
management, in connection with the particular product being
considered. If the answer is "yes" the consumer is a
"switcher", then the process moves to block 180 and asks
whether the consumer is a strong or heavy "switcher". If the
answer is "yes" the consumer is a heavy "switcher" than the
process moves to block 182 and the consumer is logged in as a
heavy "switcher". Alternatively, if the answer is "no" the

user is not a heavy "switcher", then the process moves to
block 184 and the consumer is logged in as a light "switcher".
In either case, after step 182 or 184, the process moves to
"A" which appears at the top of Fig. 3B.

If the answer was "no" in logic block 170 (the behavior
is not a "switcher"), than the process moves to logic block
168 and asks whether the consumer behavior is competitive, as
defined by management, in connection with the particular
product. Competitive consumer behavior is defined as a
consumer behavior that is loyal to brands that are in
competition with the brand now being considered for the
promotion. For example, a consumer who purchases Pepsi Cola
soft drinks exclusively would be categorized as a competitive
user for a promotion of Coca-Cola. If the answer is "yes",
the consumer behavior is competitive, then the process moves
to block 186 and asks whether the consumer behavior is strong
or heavy competitive, then the process moves to block 188 and
the consumer is logged in as exhibiting heavy competitive
behavior. Alternatively, if the answer is "no" the user does
not exhibit heavy competitive behavior, then the process moves
to block 190 and the consumer is logged in as exhibiting light
competitive behavior. In either case, after step 188 or 190
the process moves to "A" which appears at the top of Fig. 3B.

In each scenario above after logging in the consumer's
behavior characteristics the process moves to "A" which
appears at the top of Fig. 3A, and moves to logic block 200.
Logic block 200 asks "are there offers
(coupons/vouchers/advertising messages/other) for this

promotion segment?" If there are not any offers, then the
process moves to "B". "B" returns the process to step 162 in
order to review the next offer in the promotion and marketing
database formed in step 152.

If the answer is "yes" in logic block 200, there are
offers, then the process moves to logic block 202 and asks
"has the consumer not seen this offer twice with no response?"
If the answer is "no", the consumer has seen this offer twice
with no response, then the process moves to "B".
Alternatively, if the answer is "yes", the consumer has not
seen offer twice with no response, then the process moves to
step 204 and the offer is added to the list of possible
offers.

The process next moves to logic block 206 and asks
whether the promotion and marketing database formed in step
152 is exhausted? If the database is not exhausted, then the
process loops back to "A". If the database is exhausted, then
the process moves to step 208 and sorts the presentation list
by consumer purchase cycle. The consumer purchase cycle is
one way of sorting the list of possible promotions. The
consumer purchase cycle sort reviews the consumer database and
determines purchase frequency for the possible promotions, and
determines whether the consumer is ready for another purchase
of the product based on past purchase history. For example,
if the consumer purchases oven cleaner approximately every six
months, and the last purchase of oven cleaner by the consumer
was one month ago, then oven cleaner would be low on the
purchase cycle list. Alternatively, if it had been five

months since the last purchase of oven cleaner, then it would
be high on the purchase cycle list.

The process then moves to block 210 and sorts the
presentation list by highest percentage of discount. This is
a second sort choice, and gives more weight to coupons
offering higher percentage of discounts. After block 210, the
process moves to step 212 and applies a custom sort when
applicable. A custom sort is a third sort option which is
based on management preference. In particular, a custom sort
may focus on seasonal items, such as providing candy prior to
Halloween, or cranberry sauce prior to the Thanksgiving
holiday. After completion of step 212 the process moves to
step 214 and shows the top ranked promotions on the
presentation list. The rank is based on any or all of the
three sort options. In the preferred embodiment 35-40
promotions are shown; however this number is variable based on
management preference.

Accordingly, the present invention provides a system for
presenting promotional offers customized to individual
consumers which can either be a front-end or back-end system,
and the promotional offers can be obtained in store locations
or over on-line computer services. The system includes a
primary computer having a data processing unit coupled to
memory for storing information about consumer and information
concerning available promotional offers. A secondary computer
receives customized offer information produced by the primary
computer and presents customized offers and generates offer
selection information in accordance with interaction from the

consumer. The offer selection information is then sent back to the primary machine to update the consumer profile information. Point of sale terminals are also provided to record the consumer transaction information generated at check-out for later transmission to the primary machine, so that the primary machine can update the individual consumer database.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and, since certain changes may be made in carrying out the above method and in the construction set forth without departing from the spirit and scope of the invention, that is intended that all matter contained in the above description and shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said fall there between.

CLAIMS

What is claimed is:

1.   A system for making customized promotional offers available to individual consumers, comprising:

at least one primary machine including a data processing unit coupled to a storage device for storing individual consumer preference information, product information and customized promotional offer information;

at least one secondary machine adapted to receive said customized promotional offer information from said primary machine and present customized promotional offers while generating promotional offer selection information in response to consumer interaction;

said at least one secondary machine transmitting said promotional offer selection information to said at least one primary machine;

a plurality of point of sale terminals including means for accumulating consumer transaction information;

said accumulating means being adapted to transmit said consumer transaction information to said at least one primary machine;

said at least one primary machine storing said individual promotional offer selection information and individual consumer transaction information, and generating an individual consumer profile; and

said at least one primary machine generating customized promotional offer information based on said individual consumer profile and said product information.

2.   The system for making customized promotional offers
of claim 1 wherein said system categorizes each consumer based
on past purchase history of particular products.

3.   The system for making customized promotional offers
of claim 2 wherein said system categorizes the consumers based
on the quantity of goods purchased by the consumer.

4.   The system for making customized promotional offers
of claim 2 wherein said system categorizes the consumers based
on the consumers' brand loyalty.

5.   The system for making customized promotional offers
of claim 2 wherein said system creates a list of possible
promotions.

6.   The system for making customized promotional offers
of claim 5, wherein said list of possible promotions is sorted
based on the consumer purchase cycle information.

7.   The system for making customized promotional offers
of claim 6, wherein said consumer purchase cycle information
is obtained from said individual consumer profile.

8.   The system for making customized promotional offers
of claim 5, wherein said list of possible promotions is sorted
based on the percentage of discount offered in the promotional
offers.

9.   A method of customizing promotional offers to
individual consumers, comprising the steps of:

        obtaining individual consumer preference information;

        storing said individual consumer preference information;

        inputting manufacturer promotional availability
information;

storing said manufacturer promotional availability information;

classifying said consumer behavior with respect to each stored manufacturer promotion available;

ranking available promotional offers based on predetermined parameter; and

presenting a predetermined number of the top ranked promotional offers to each individual consumer.

10.   The method of customizing promotional offers of claim 9, wherein said individual consumer preference information includes demographic data.

11.   The method of customizing promotional offers of claim 9, wherein said individual consumer preference information includes past promotional offers requested.

12.   The method of customizing promotional offers of claim 9, wherein said individual consumer preference information includes consumer purchase history information.

13.   The method of customizing promotional offers of claim 9, wherein said classifying step includes classifying said consumer behavior in connection with brand loyalty.

14.   The method of customizing promotional offers of claim 9, wherein said classifying step includes classifying said consumer behavior in connection with consumer purchase quantities.

15.   The method of customizing promotional offers of claim 13, wherein said classifying step includes classifying said consumer behavior in connection with purchase quantities.

16. The method of customizing promotional offers of claim 9, wherein said ranking is based on consumer purchase cycle information.

17. The method of customizing promotional offers of claim 9, wherein said ranking is based on the percentage of discount offered in the promotional offers.

18. The method of customizing promotional offers of claim 9, further including the step of selecting promotional offers from those presented.

19. The method of customizing promotional offers of claim 18, further including the step of printing the selected promotional offers.
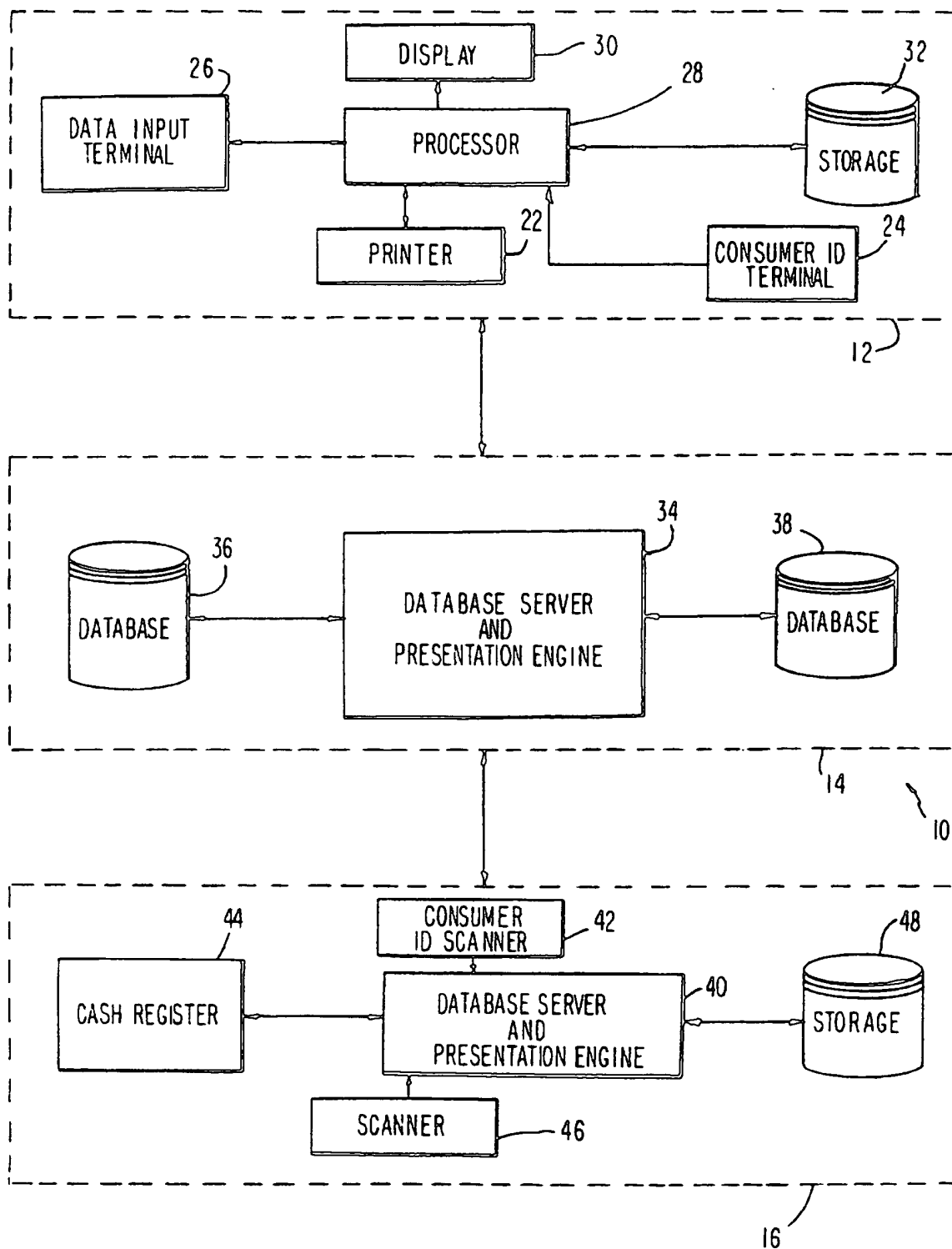
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FIG. 1

FIG. 2

FIG.3A

150 PROMOTION/VOUCHER AVAILABILITY DATA ENTRY

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158 IMPORT CONSUMER PURCHASES/PROFILES

156 TRANSACTION/BEHAVIORAL DATA

152 PROMOTION AND MARKETING DATABASE DB#1

160 CONSUMER BEHAVIOR DATABASE DB#2

B

162 FOR EACH PROMOTION/ADVERTISING ENTRY IN DB#1 PERFORM:

164 IS ANY BEHAVIOR IN DB#2 ASSOCIATED WITH THIS ENTRY?

NO

166 SHOW DEFAULT PRESENTATION FOR THE ENTRY IN DB#1

YES

172 IS BEHAVIOR IN DB#2 RELATED TO DB#1 AS LOYAL?

NO

170 IS BEHAVIOR IN DB#2 RELATED TO DB#1 AS SWITCHER?

NO

168 IS BEHAVIOR IN DB#2 RELATED TO DB#1 AS COMPETITIVE?

NO

YES

174 IS LOYAL BEHAVIOR STRONG (HEAVY)?

NO

YES

180 IS SWITCHER BEHAVIOR STRONG (HEAVY)?

NO

YES

186 IS COMPETITIVE BEHAVIOR STRONG (HEAVY)?

NO

YES

176 LOG CONSUMER AS HEAVY LOYAL FOR PRESENTATION

GO TO A

182 LOG CONSUMER AS HEAVY SWITCHER FOR PRESENTATION

GO TO A

188 LOG CONSUMER AS HEAVY COMPETITIVE FOR PRESENTATION

GO TO A

178 LOG CONSUMER AS LIGHT LOYAL FOR PRESENTATION

GO TO A

184 LOG CONSUMER AS LIGHT SWITCHER FOR PRESENTATION

GO TO A

190 LOG CONSUMER AS LIGHT COMPETITIVE FOR PRESENTATION

GO TO A

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FIG.3B

A

ARE THERE INCENTIVES AVAILABLE IN THIS PROMOTION SEGMENT ? —200— NO → GO TO B

YES

HAS THE CONSUMER NOT SEEN THIS OFFER TWICE WITH NO RESPONSE ? —202— NO → GO TO B

YES

ADD INCENTIVE OFFER TO LIST OF POSSIBLE PROMOTIONS (PRESENTATION LIST) —204

DB# I ENTRIES EXHAUSTED ? —206— NO → GO TO B

YES

SORT PRESENTATION LIST (PLIST) BY CONSUMER PURCHASE CYCLE (IF AVAILABLE) —208

SORT PLIST BY HIGHEST PERCENTAGE OF DISCOUNT —210

APPLY CUSTOM SORT (IF APPLICABLE) —212

SHOW TOP X PROMOTION INCENTIVES IN PLIST —214

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :G06F 17/60

US CL :395/214

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 395/214, 216, 221

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US, A, 5,056,019 (SCHULTZ ET AL) 08 October 1991, abstract; figs. 1-2; col. 6, line 39 to col. col. 7, line 32; col. 8, line 25 to col. 9, line 24.	1-19
A	US, A, 5,327,508 (DEATON ET AL) 05 July 1994, abstract; figs. 13A-18C; col. 59, line 8 to col. 73, line 23.	1-19
X	US, A, 5,353,218 (DE LAPA ET AL) 04 October 1994, abstract, figs. 4-7b; col. 4, line 34 to col. 6, line 39; col. 7, line 2 to col. 16, line 9; and col. 19, line 62 to col. 20, line 68.	1-19

[X] Further documents are listed in the continuation of Box C.   [ ] See patent family annex.

*	Special categories of cited documents:	
"A"	document defining the general state of the art which is not considered to be of particular relevance	
"E"	earlier document published on or after the international filing date	
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	
"O"	document referring to an oral disclosure, use, exhibition or other means	
"P"	document published prior to the international filing date but later than the priority date claimed	

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
01 FEBRUARY 1997	0 5 MAR 1997

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Form PCT/ISA/210 (second sheet)(July 1992)*

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US, A, 5,459,306 (STEIN ET AL) 17 October 1995, abstract, figs. 1-4; col. 2, line 59 to col. 3, line 30; col. 3, line 60 to col. 8, line 65.	1-19

B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

APS

search terms: promotionals, promoting, point of sale, customer demographics, purchasing history, ranking offers, consumer profiles